

REMARKS

By this Response, no claims are amended, added or cancelled. Claims 12 and 13 remain withdrawn from consideration as being directed to a non-elected invention. After entry of this Response, claims 1-13 will remain pending in the patent application.

Claims 1-11 were rejected under 35 U.S.C. 103(a) based on Van den Brink (U.S. Patent No. 4,778,275), (hereinafter '275 patent) in view of Shigeo (JP 6-302495), (hereinafter "Shigeo"). The rejection is respectfully traversed.

Claim 1 recites a method of positioning an object at a required position on an object table in a lithographic projection apparatus, comprising: placing an object at a first position on a first object table; measuring a displacement between the first position of the object and a required position of the object; removing the object from the first object table; moving the object and the first object table relatively to each other by substantially the said displacement, in a direction substantially parallel to the plane of the table; and placing the object at substantially the required position on the first object table.

As conceded by the Examiner, the '275 patent does not teach or suggest removing the object from the first object table. However, and as mentioned in Applicants' Response dated June 6, 2005 (hereinafter "Applicants' last Response"), there are additional features that are absent in the '275 patent.

Thus, as amply discussed in Applicants' last Response, the '275 patent is completely silent as to (a) measuring a displacement between the first position of the object and a required position of the object, (b) moving the object and the first object table relatively to each other by substantially the said displacement, in a direction substantially parallel to the plane of the table; and (c) placing the object at substantially the required position on the first object table.

The '275 patent merely discloses aligning a mask and a substrate relative to each other by moving the table in the X and Y directions until a plurality of marks are aligned. (e.g., mask mark M2 is aligned with substrate mark P1). The '275 patent uses an alignment system AS1 to determine the relative position of the mask mark M2 and the substrate mark P1 to align the mask and the substrate relative to each other. The '275 patent states, for example, at col. 8, lines 58-63:

These signals can be processed electronically and may be employed to move the mask and the substrate relative to each other by means of drive systems, not shown, in such a way that the image of the mark P1 coincides with the mark M2. Thus an automatic alignment is obtained.

There is absolutely no teaching or suggestion in the '275 patent to provide the features (a), (b) and (c) set forth hereinabove. The Examiner has clearly failed to point out where such features are disclosed in the '275 patent.

In response to Applicants' last Response, the Examiner stated: "the examiner would like to point out that the limitation moving the mask and the mask relative each other, is not claimed in any claims." This statement clearly lacks merit because it fails to address Applicants' arguments.

Applicants argued in their last response that the '275 patent is totally silent as to moving an object relative to its object table. However, since the Examiner identified in the previous Office Action the mask and the mask table of the '275 patent as being, respectively, the "object" and the "first object table" of claim 1, Applicants also pointed out that neither the mask and the mask table nor the substrate and the substrate table in the '275 patent are moved relative to each other. These are examples of the claimed subject matter even though the claims use broader terms. As such, maintaining the rejection of the claims on the ground that "the limitation moving the mask and the mask relative each other, is not claimed in any claims" clearly lacks merit.

In response to Applicants' last Response, the Examiner also stated: "reference '275 discloses object place on first position, measuring a displacement, removing the object, moving the object and the table relative to one another and placing the object at the required, (see col. 7, lines 24-40, the mask "object" is at the first position and the system AS1 aligns the mask by positioning the mask at the required position, see col. 7 line 64 through col. 8, line 5), as claimed." Applicants respectfully disagree.

Unlike claim 1, the '275 patent merely discloses moving the mask and the substrate relative to each other. The '275 patent does not disclose moving an object (*e.g.*, the mask) and the object table (*e.g.*, the mask table) (on which the object was placed) relative to each other. That is, the present invention relates to re-setting an object on an object table at a different position. The '275 patent merely describes moving a set object with its table.

Shigeo fails to remedy the deficiencies of claim 1. Shigeo merely discloses removing the reticle 12 from the stage 11, rotating the stage 11, placing the reticle 12 back on the stage 11 and rotating the stage 11 in the reverse direction to return the reticle 12 to its original

condition. Shigeo is completely silent as to moving the object and the first object table relatively to each other by substantially the said displacement, in a direction substantially parallel to the plane of the table; and placing the object at substantially the required position on the first object table. Therefore, any reasonable combination of the '275 patent and Shigeo cannot result in any way in the invention of claim 1.

Claims 2-10 are patentable over the '275 patent, Shigeo and a combination thereof at least by virtue of their dependency from claim 1 and for the additional features recited therein.

Claim 11 is patentable over the '275 patent, Shigeo and a combination thereof for at least similar reasons as provided above in claim 1, and for the additional features recited therein. Namely, claim 11 is patentable over the '275 patent, Shigeo and a combination thereof at least because this claim recites a method of positioning a substrate at a required position on a substrate table, said method comprising, *inter alia*, measuring a displacement between the first position of the substrate and a required position of the substrate; moving the substrate and the table relatively to each other by substantially the said displacement, in a direction substantially parallel to the plane of the table; and placing the substrate at substantially the required position on the table. For the same reasons provided above, any reasonable combination of the '275 patent and Shigeo cannot result in any way in the invention of claim 11.

Furthermore, Applicants respectfully submit that there is no motivation or suggestion to combine the teachings of the '275 patent and Shigeo.

The Examiner alleged in paragraph 4 of the Office Action that "the object removing system of the Shigeo can be placed into the '275 patent in order to accurately align the reticle at a high speed." Applicants respectfully disagree.

The '275 patent merely discloses accurately aligning the substrate with the mask once the substrate and the mask are positioned on their respective tables. As mentioned previously, the alignment is carried out by moving the tables in the X and Y directions until a plurality of marks are aligned (*e.g.*, mask mark M2 is aligned with substrate mark P1). As such, there is clearly no motivation to remove the mask or the substrate from their respective tables, as suggested by the Examiner, since this would prevent the substrate from being aligned with the mask. Therefore, the Examiner's rationale for the suggested combination clearly lacks merit.

Accordingly, reconsideration and withdrawal of the rejection of claims 1-11 under 35 U.S.C. 103(a) based on Van den Brink in view of Shigeo are respectfully requested.

Applicants have addressed all the Examiner's rejections and objections and respectfully submit that the application is in condition for allowance. A notice to that effect is earnestly solicited. If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP



ROBERT C. PEREZ

Reg. No. 39328

Tel. No. 703.770.7759

Fax No. 703.770.7901

RCP/CFL  
P.O. Box 10500  
McLean, VA 22102  
(703) 770-7900